PPI / NARGAN	DEHDASHT PETROCHEMICAL INDUSTRY COMPANY DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT	PGPIC
	DOCUMENT TITLE: ON/OFF Valve Data Sheet	POI: IFA / Rev.: D0
Contract No.: DPIC/98-12	DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0085	Sheet 1 of 6

GENERAL COMMENT:
Flowrates shall be checked and revised based on approved data sheets and heat & material balance.

DOCUMENT TITLE:

On/Off Valves Data Sheet

PURCHASER'S COMMENT/APPROVAL STATUS	
1	AP: Approved (Released for Manufacturing)
X	AN: Approved With Minor Comments (Fabrication may Proceed)
3	NF: Approved With Comments (Fabrication not Proceed)
4	RJ: Rejected
5	NR: Not be Returned
Date: 03.04.2022	Signature: A.AB

Purchaser: NARGAN

Requisition No.: DPIC98-12-001-000-ME-MR-4150-0001-D1

Item No. (Tag No.): PK-6101

Vendor Doc. No.: DPIC9812-000-VD-1002-ME-DS-0085-D0

REV	DATE ISSUE	PREPARED	CHECKED	APPROVED
D0	1.Feb..22	R.Sabbaghi	A.MALEKINIA	DR.A.Nejati

KASRAVAND Engineering & Construction

Page	Rev-D0	Rev-D1	Rev-D2	Rev-D3	Rev-D4
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PPI / NARGAN	**DEHDASHT PETROCHEMICAL INDUSTRY COMPANY** **DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT**	PGPIC
	DOCUMENT TITLE: ON/OFF Valve Data Sheet	**POI: IFA** / **Rev. No.: D0**
Contract No.: DPIC/98-12	**DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0085**	48 **Sheet 3 of 6**

GENERAL DATA

1	Tag: .....**See List**.....	4	Ambient Temperatue (°C) Min: **-15** Max: **+45**
2	P&ID Number: .....**See List**.....	5	Relative Humidity (%) Min: **45** Max: **90**
3	Service: .....**See List**.....	6	Applicable Standards: .....**ANSI/API 608, ANSI B16**.....

BASIC DATA

	PROCESS CONDITION	18	Body & Bonnet Material: .....**See List**.....
7	Process Fluid/Phase: .....**See List**.....	19	Liner Material: .....**VTS**.....
8	Line No.: .....**See List**.....	20	Packing Material: .....**VTS**.....
9	Flow Rate(Norm.,Max): .....**See List**.....**kg/h**	21	Bonnet Type: .....**VTS**.....
10	Inlet Pressure(Norm.,Max): .....**See List**.....**barg**	22	Packing Type: .....**Manufacturer Standard**.....
11	Outlet Back-Pressure(Norm.,Max): .....**See List**.....**barg**	23	Fire Safe: .....**Not Required**.....
12	Inlet Temperature(Norm.,Max): .....**See List**.....**°C**		TRIM (WETTED PARTS)
13	Density (Max): .....**See List**.....**kg/m^3**	24	Connection Size & Rating: .....**See List**.....
14	Viscosity (Max): .....**See List**.....**cP**	25	Type: .....**VTA**.....
15	Liquid Critical / Vapor Pressure: .....**See List**.....**barg**	26	Characteristics: .....**Full Open-Full Close(ON/OFF)**.....
	VALVE	27	Plug/Ball/Disk Material: .....**See List (VTA)**.....
16	Valve Type: .....**See List**	28	Seat/Cage/Guide Material: .....**See List (VTA)**.... AISI 316
17	Connection Type: .....**Se**	29	Stem Material: .....**VTS**..... AISI 316

min air pressure:6.5barg

Based on project specification stroke time to be considered as below:
Size ½" – 2½": ½ second
Size 3" – 6": 1 second
Size 8" - 12": 5 seconds.

ACTUATOR

	..**Piston-Spring Return**.....	38	Orientation: .....**Parallel to Valve Body**..... Actuator Size: VTA (note 2)
	.....**Manufacturer Standard**.....	39	Air Failure Valve set: .....**See List**.....
	tor: .....**25%**.....	40	Air Connection: .....**Match with Solenoid Valve**... 1/2" NPT
	essure: .....**See List**.....	41	On Load Test Handle/Valve: .....**Required(Note1)**.....
	ssure(Min/Norm./Max/Design): .....**5.5/7/7.5/10.5**.....**barg**	42	Hydrostatic Test Pressure: .....**1.5 x Design Pressure**.....
37	Full Operating Time: .....**Less Than 10 Seconds**.....	43	Leakage Class: .....**III As ANSI B16.104**..... ANSI Class VI

Min. 4 barg

ACCESSORIES

	SWITCH BOX	53	Power Consumption: .....**VTS**.....
44	Requirement: .....**Yes**.....	54	Air Inlet: .....**G 1/4"**.....
45	No. of Switches: .....**2 (Open & Close)**.....	55	Working Pressure: .....**2~10(VTA)**.....**barg**
46	Switch Contact/Rating: .....**SPDT-Mechanical/2A @ 230VAC**.....	56	Ingreess Protection: .....**IP65**.....
47	Switch Points: .....**Full Open & Full Close**.....	57	Ex. Protection: .....**See List**.....
48	Electrical Connection: .....**4 * M20x1.5**.....	58	Electrical Connection: .....**1 * M20x1.5 ~~or 1m Integral Cable~~**.....
	SOLENOID VALVE		OTHER
49	Type: ☐**NONE** ☑**3/2** ☐**5/2**		Adjustable Flow Regulator: .....**Required**.....
50	Body Material: .....**Man**.....**dard**..... 316 SS	60	Local Pressure Indicator: .....**Required**.....
51	Mounting: .....**Direct Mount on Actuator (NAMUR)**.....	61	Hand Operated Valve: .....**Not Required**.....
52	Power Supply: .....**24 VDC**.....	62	Volume Tank: .....**Not Required**.....

Solenoid valve electrical classification SHALL be Ex-d IIC T3

MODEL DATA

63	Manufacturer: .....**HOLD**.....	65	Purchase Order No.: .....**HOLD**.....
64	Model: .....**HOLD**.....	66	Order Code: .....**HOLD**.....

REMARKS

VTS : Vendor To Specifiy
VTA: Vendor to Advise

Note 1: Required Only If Manual Override not Considered on the Solenoid Valve

Note 2: Actuators shall be sized to obtain the specified stroke time

DEHDASHT PETROCHEMICAL INDUSTRY COMPANY

DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT

DOCUMENT TITLE: ON/OFF Valve Data Sheet

Contract No.: DPIC/98-12

DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0085

Sheet 4 of 6

ON-OFF VALVE LIST

ITEM	TAG. NO.	P&ID DPIC9812-000-VD-1002-ME-LST-0051 - 02	SERVICE	PROCESS FLUID/PHASE	LINE NO.	VALVE TYPE	CONNECTION TYPE	BODY/BONNET MATERIAL	PLUG/BALL/DISK MATERIAL	SEAT/CAGE/GUIDE MATERIAL	EX. PROTECTION	FLOW RATE(m³/hr)		INLET PRESSURE (barg)		OUTLET BACK-PRESSURE (barg)		INLET TEMPERATURE (°C)		Density (kg/m3)	VISCOSITY (cP)	LIQ. CRITICAL/VAPOR PRESSURE (bara)	SIZE & RATING	SHUTOFF PRESSURE (barg)	AIR FAILURE	REV.
												NORMAL	MAXIMUM	NORMAL	MAXIMUM	NORMAL	MAXIMUM	NORMAL	MAXIMUM							
1	XV-61136	2 OF 4	SCREW COMPRESSOR (C-PK6101-1A) PROPYLENE INLET	PROPYLENE/GAS	6"-PR-61127-1DL4-M	BALL (REDUCED BORE)	RF FLANGED	ASTM A 352 Gr. LCB - SIDE ENTRY	A351 CF8M (VTA)	PTFE (VTA)	Ex d IIB T6/T5	450	600	7	24	F.V	0	24	F.V	15	50	17	0.008	45	6"/#300	30	FAIL CLOSE	D0
2	XV-61124	2 OF 4	SCREW COMPRESSOR (C-PK6101-1B) PROPYLENE INLET	PROPYLENE/GAS	6"-PR-61128-1DL4-M	BALL (REDUCED BORE)	RF FLANGED	ASTM A 352 Gr. LCB - SIDE ENTRY	A351 CF8M (VTA)	PTFE (VTA)	Eex d IIB T6/T5	450	600	7	24	F.V	0	24	F.V	15	50	17	0.008	45	6"/#300	30	FAIL CLOSE	D0
3	XV-61135	2 OF 4	ECONOMIZER (E-PK6101-3) PROPYLENE TUBE INLET	PROPYLENE/LIQUID	3"-PR-61126-1DL4-M	BALL (REDUCED BORE)	RF FLANGED	ASTM A 352 Gr. LCB - SIDE ENTRY	A351 CF8M (VTA)	PTFE (VTA)	Eex d IIB T6/T5	16	25	20	24	F.V	0	24	F.V	48	80	460	0.06	45.5/20	3"/#300	30	FAIL CLOSE	D0
4	XV-61134	2 OF 4	EVAPORATOR (E-6101) PROPYLENE SHELL INLET	PROPYLENE/LIQUID	6"-PR-61130-1DL4-M	BALL (REDUCED BORE)	RF FLANGED	ASTM A 352 Gr. LCB - SIDE ENTRY	A351 CF8M (VTA)	PTFE (VTA)	Eex d IIB T6/T5	38	50	20	24	F.V	0	24	F.V	16	50	525	0.09	45.5/9.2	6"/#300	30	FAIL CLOSE	D0
5	XV-61131	3 OF 4	OIL COOLER (E-PK6101-1A) JACKET WATER OUTLET	WATER/LIQUID	3"-JWR-61121-4CC2-N	BALL (FULL BORE)	RF FLANGED	ASTM A 216 GR. WCB SPLIT BODY	A351 CF8M (VTA)	PTFE (VTA)	Eex d IIB T6/T5	25	40	6	11	0	6	45	70	1000	0.5	220/0.3	3"/#150	20	FAIL CLOSE	D0
6	XV-61132	4 OF 4	OIL COOLER (E-PK6101-1A) JACKET WATER OUTLET	WATER/LIQUID	3"-JWR-61122-4CC2-N	BALL (FULL BORE)	RF FLANGED	ASTM A 216 GR. WCB SPLIT BODY	A351 CF8M (VTA)	PTFE (VTA)	Eex d IIB T6/T5	25	40	6	11	0	6	45	70	1000	0.5	220/0.3	3"/#150	20	FAIL CLOSE	D0

AISI 316 as min

Finish: 125-250 AARH

-Line number format shall be changed as per piping comments on the PID (PK shall be added)
-End connection of valves shall be same as project PMS and devian is not acceptable

23

7.3

18.9

19

135

to be correct same as heat exchanger DSH.

25

25

correct value to be inserted. All valves are in normal operation.

190

To be revised based on final thermal design.

462

0.06

25

PPI / NARGAN	**DEHDASHT PETROCHEMICAL INDUSTRY COMPANY** **DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT**	PGPIC
	DOCUMENT TITLE: ON/OFF Valve Data Sheet 48	**.: D0**
Contract No.: DPIC/98-12	**DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0085**	**Sheet 5 of 6**

GENERAL DATA			
1	Tag: ……**See List**……	4	Ambient Temperatue (°C) Min: **-15** Max: **+45**
2	P&ID Number: ……**See List**……	5	Relative Humidity (%) Min: **45** Max: **90**
3	Service: ……**See List**……	6	Applicable Standards: …**IEC216, UL, FM, CSA, IEC60079, ANSI B16**…
BASIC DATA			
PROCESS CONDITION		17	Estimated/Vendor Specified Orifice Size: ……**See List**……**in**
7	Process Fluid/Phase: ……**See List**……	18	Estimated/Real Flow Factor (Cv): ……**See List**……
8	Line No.: ……**See List**……	19	Operation Type: ……**Direct (Non-Pilot Operated)**……
9	Flow Rate(Norm.,Max): ……**See List**……**kg/h**	20	Orifice Quantity: ……**1 (VTS)**……
10	Operating Inlet Pressure (Norm.,Max): ……**See List**……**barg**	21	Enclosure Classifcation: ……**Industrial / Watertight & Dusttight**……
11	Operating Differential Pressure (Norm.,Max): ……**See List**……**barg**	22	Fire Safe: ……**Not Required**……
12	Inlet Temperature(Norm.,Max): ……**See List**……**°C**	BODY MATERIAL	
13	Density (Max): ……**See List**……**kg/m³**	23	Enclosure: ……**See List**……
14	Viscosity (Max): ……**See List**……**cP**	24	Seal & Disc: ……**VTS**……
SOLENOID VALVE		25	Shading Coil: ……**VTS**……
15	Valve Type: ……**See List**……	26	Core Tube: ……**VTS**……
16	Connection Size / Type / Rating: ……**See List**……	27	Spring: ……**VTS**……
SOLENOID COIL			
28	Type: ……**DIN, Detachable, Match to Valve**……	34	Duty: ……**Continious**……
29	Minimum Winding Temperature Class: ……**Class F (VTA)**……	35	Shading Coil: ……**Not Required**……
30	Coil Insulation System: ……**VTS**……	36	Explosion Proof Class: ……**See List**……
31	Voltage Rating: ……**24VDC ±5%**……	37	Temperature Rise Class: ……**T4 (135°C)**……
32	Inrush Current: ……**N/A**……**A**	38	Max Attainable Surface Temperature at 45°C : ……**VTS**……
33	Holding Current: ……**VTS**……**A**	39	Connection: .**M20 Gland** …
ACCESSORIES			
MANUAL RESET		42	Manufacturer: ……**HOLD**……
40	Requirement: ……**No**……	43	Model: ……**HOLD**……
41	Latch State: ……**N/A**……	44	Order Code: ……**HOLD**……

REMARKS

VTS : Vendor To Specifiy
VTA: Vendor to Advise

DEHDASHT PETROCHEMICAL INDUSTRY COMPANY

DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT

DOCUMENT TITLE: ON/OFF Valve Data Sheet

POI: IFA **Rev. No.: D0**

Contract No.: DPIC/98-12 **DOCUMENT NUMBER: DPIC9812-000-VD-1002-ME-DS-0085**

Solenoid valve SHALL be three or four way type

135°C based on evaporator & KO drum data sheet. Please recheck.

FV based on evaporator or KO drum data sheet. pelase recheck.

579 kg/m3 based on evaporator data sheet. Please recheck.

23 barg

0.14 cP based on evaporator data sheet. please recheck.

please recheck.

-45°C based on condenser data sheet. please recheck.

FV

FV

FV

FV

SOLENOID VALVE LIST

ITEM	TAG. NO>	P&ID DPIC9812-000-VD-1002-ME-LST-0051 -D2	SERVICE	PROCESS FLUID/PHASE	LINE NO./TUBING DESCRIPTION	VALVE TYPE	CONNECTION SIZE / TYPE	VALVE BODY MATERIAL	ESTIMATED ORIFICE SIZE (in)	ESTIMATED Cv	EX PROTECTION	FLOW RATE(LPM)		INLET PRESSURE (barg)		DIFF. PRESSURE (barg)		INLET TEMPERATURE (°C)		DENSITY (kg/m³)	VISCOSITY (cP)	FUNCTION	REV
												Normal	Maximum	Normal	Maximum	Normal	Maximum	Normal	Maximum				
1	SOV-61133	2/4	EVAPORATOR (E-6101) OIL RECOVERY NOZZLE OUTLET	LUBE OIL/LIQUID	EVAPORATOR OIL RECOVERY	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	16 (VTS)	Exe d IIB T4	200	400	3	23	0.1	20	-25	-45/AMB	880	280	NORMAL CLOSE	D0
2	SOV-61130	2/4	SCREW COMPRESSOR (C-PK6101-1B) OIL INLET	LUBE OIL/LIQUID	COMPRESSOR A INLET OIL LINE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	16 (VTS)	Exe d IIB T4	200	400	4	23	0.1	20	-10	-45/AMB	880	280	NORMAL CLOSE	D0
3	SOV-61129	2/4	SCREW COMPRESSOR (C-PK6101-1A) OIL INLET	LUBE OIL/LIQUID	COMPRESSOR B INLET OIL LINE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	16 (VTS)	Exe d IIB T4	200	400	4	23	0.1	20	-10	-45/AMB	880	280	NORMAL CLOSE	D0
4	SOV-61122	2/4	K.O DRUM (D-PK6101-3) OIL OUTLET	LUBE OIL/LIQUID	K.O. DRUM OIL DRAIN LINE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	16 (VTS)	Exe d IIB T4	200	400	3	23	0.1	20	-25	-45/AMB	880	280	NORMAL CLOSE	D0
5	SOV-61123	2/4	OIL SEPARATOR (D-PK6101-1A/D-PK6101-1B) OIL OUTLET	LUBE OIL/LIQUID	CONDENSER LINE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	11 (VTS)	Exe d IIB T4	200	400	20	25	0.5	20	80	135	880	2	NORMAL CLOSE	D0
6	SOV-61120A	3/4	SCREW COMPRESSOR (C-PK6101-1A) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL LOAD RETURN TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
7	SOV-61120B	3/4	SCREW COMPRESSOR (C-PK6101-1A) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL UNLOAD SUPPLY TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
8	SOV-61120C	3/4	SCREW COMPRESSOR (C-PK6101-1A) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL LOAD SUPPLY TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
9	SOV-61120D	3/4	SCREW COMPRESSOR (C-PK6101-1A) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL UNLOAD RETURN TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
10	SOV-61126	3/4	OIL SEPARATOR (D-PK6101-1A) OIL OUTLET	LUBE OIL/LIQUID	OIL SEPARATOR OUTLET TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	2 (VTS)	Exe d IIB T4	200	400	20	23	20	30	30	90	875	1.7	NORMAL CLOSE	D0
11	SOV-61125	3/4	OIL SEPARATOR (D-PK6101-1A) OIL OUTLET	LUBE OIL/LIQUID	OIL SEPARATOR OUTLET TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	2 (VTS)	Exe d IIB T4	200	400	20	23	20	30	30	90	875	1.7	NORMAL CLOSE	D0
12	SOV-61121A	4/4	SCREW COMPRESSOR (C-PK6101-1B) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL LOAD RETURN TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
13	SOV-61121B	4/4	SCREW COMPRESSOR (C-PK6101-1B) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL UNLOAD SUPPLY TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
14	SOV-61121C	4/4	SCREW COMPRESSOR (C-PK6101-1B) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL LOAD SUPPLY TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
15	SOV-61121D	4/4	SCREW COMPRESSOR (C-PK6101-1B) CAPACITY CONTROL SYSTEM	LUBE OIL/LIQUID	OIL UNLOAD RETURN TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	8 (VTS)	Exe d IIB T4	100	350	23	25	0.5	30	50	70	880	2.2	NORMAL CLOSE	D0
16	SOV-61128	4/4	OIL SEPARATOR (D-PK6101-1B) OIL OUTLET	LUBE OIL/LIQUID	OIL SEPARATOR OUTLET TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	2 (VTS)	Exe d IIB T4	200	400	20	23	20	30	30	90	875	1.7	NORMAL CLOSE	D0
17	SOV-61127	4/4	OIL SEPARATOR (D-PK6101-1B) OIL OUTLET	LUBE OIL/LIQUID	OIL SEPARATOR OUTLET TUBE	2 WAY - 2/2	1/2" NPT-FEMALE	S.S 316	5/8 (VTS)	2 (VTS)	Exe d IIB T4	200	400	20	23	20	30	30	90	875	1.7	NORMAL CLOSE	D0